

Docket 79594TJS
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

David M. Orlicki, et al

INTELLIGENT POWER
MANAGEMENT SYSTEM

Serial No. 09/654,745

Filed 01 September 2000

Group Art Unit: 2622
Confirmation No. 7150
Examiner: Kelly L. Jerabek

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SUPPLEMENTAL APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35

U.S.C. 134

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APPELLANTS' BRIEF ON APPEAL

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 1-7 and 12-24 which was contained in the Office Action mailed June 16, 2006.

A timely Notice of Appeal was filed November 16, 2006.

Real Party in Interest

The present application is assigned of record to Eastman Kodak Company. The assignee Eastman Kodak Company is the real party in interest.

Related Appeals and Interferences

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status of Claims

The present application was filed on September 1, 2000, with claims 1-24. Claims 1-24 remain pending in the present application. Claims 1, 13 and 21 are the independent claims.

Each of claims 1-7 and 12-24 stands finally rejected under 35 U.S.C. §102(e) or §103(a). Claims 8-11 are indicated as containing allowable subject matter.

Claims 1-7 and 12-24 are appealed.

Appendix I provides a clean, double spaced copy of the claims on appeal.

Status of Amendments

A Response was entered by the Examiner subsequent to the Final Office Action mailed on June 16, 2006.

Summary of Claimed Subject Matter

Claim 1

Independent claim 1 is directed to an apparatus comprising a basic device and an accessory device. The claim specifies that the basic device includes a docking interface, and that the accessory device couples to the docking interface of the basic

device. The claim further specifies that a power supply unit of the accessory device supplies electrical energy to a control processor of the accessory device in response to a control signal received from the basic device, with the control signal being indicative of whether or not an application which requires use of the accessory device is currently running on the basic device.

In an illustrative embodiment shown in FIGS. 1 and 2 of the drawings, the basic device is a personal digital assistant (PDA) 10 having a docking interface 16, and the accessory device is a digital camera 18 having a corresponding mating interface 20. The digital camera 18 couples to the docking interface 16 of the PDA 10 as illustrated in FIG. 2. See the specification at, for example, page 3, lines 17-28. The digital camera 18 is powered on using a control signal that is indicative of whether or not an imaging application program is running on the PDA 10. See the specification at, for example, page 3, line 29, to page 4, line 2, and page 5, lines 3-9.

Claim 13

Independent claim 13 is directed to a digital camera accessory device comprising a docking interface, image processing circuitry that captures image data, a control processor that controls the operation of the image processing circuitry to perform an image capture operation, and a power supply unit that supplies electrical energy to the image processing circuitry and the control processor. The claim further specifies that the power supply unit supplies the electrical energy to the control processor in response to a control signal received from the docking interface, and that the control signal provides an indication to the accessory device that the accessory device is to be powered on using a power source internal to the accessory device. Finally, the claim recites that the control signal triggers the digital camera accessory device to transition from a powered-off state in which the power supply unit is deactivated and the control processor is powered off to a powered-on state in which the power supply unit is activated and the control processor is powered on.

In an illustrative embodiment shown in FIGS. 1 and 2 of the drawings, the digital camera accessory device is a digital camera 18 having a mating interface 20 that couples to a corresponding docking interface 16 of PDA 10 as illustrated in FIG. 2. See the specification at, for example, page 3, lines 17-28. As shown in FIG. 3, the

digital camera 18 comprises image processing circuitry including an image sensor 24 and a programmable logic device 26, and a control processor 30 which controls the image processing circuitry. The digital camera 18 further includes a power supply unit 34 that is shown in greater detail in FIG. 4. See the specification at, for example, page 4, lines 7-22. A control signal denoted CLEAR-TO-SEND (CTS) is received from the PDA 10 via the docking interface 16 and mating interface 20 as indicated in FIG. 4, and triggers the digital camera 18 to transition from a powered-off state in which the power supply unit 34 is deactivated and the control processor 30 is powered off to a powered-on state in which the power supply unit 34 is activated and the control processor 30 is powered on. See the specification at, for example, page 5, lines 1-17.

Claim 21

Independent claim 21 is directed to a method of managing the power requirements of an accessory device coupled to a basic device. The method comprises generating a first control signal with the basic device and supplying the first control signal to the accessory device, the first control signal providing an indication from the basic device to the accessory device that the accessory device is to be powered on using a power source internal to the accessory device, and activating a power supply unit of the accessory device in response to the first control signal to supply electrical power from the power supply unit to a control processor of the accessory device. The method further includes the steps of generating a second control signal with the control processor of the accessory device and supplying the second control signal to the power supply unit, and latching operation of the power supply unit in response to the second control signal to maintain the supply of electrical power from the power supply unit to the control processor regardless of the state of the first control signal. The claim further specifies that the first control signal triggers a transition of the accessory device from a powered-off state in which the power supply unit is deactivated and the control processor is powered off to a powered-on state in which the power supply unit is activated and the control processor is powered on.

In an illustrative embodiment shown in FIGS. 1 and 2 of the drawings, the basic device is a PDA 10 having a docking interface 16, and the accessory device is a digital camera 18 having a corresponding mating interface 20. The digital camera 18 couples to the docking interface 16 of the PDA 10 as illustrated in FIG. 2. See the specification at, for example, page 3, lines 17-28. As shown in FIG. 3, the digital camera 18 comprises a control processor 30 and a power supply unit 34 that is shown in greater detail in FIG. 4. See the specification at, for example, page 4, lines 7-22. A first control signal denoted CTS is received from the PDA 10 via the docking interface 16 and mating interface 20 as indicated in FIG. 4, and triggers the digital camera 18 to transition from a powered-off state to a powered-on state. See the specification at, for example, page 5, lines 1-17. A second control signal denoted SMPS ENABLE is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5.

Grounds of Rejection to be Reviewed on Appeal

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Claims 1-3, 7 and 21-24 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,597,389 (hereinafter “Tanaka”).
2. Claims 4, 13-16 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka.
3. Claims 6, 12, 18 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka in view of allegedly admitted prior art.
4. Claims 5 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka in view of U.S. Patent No. 6,191,814 (hereinafter “Elberbaum”).

Arguments

1. §102(e) Rejection of Claims 1-3, 7 and 21-24

Claims 1 and 7

The Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the “identical invention . . . in as complete detail as is contained in the . . . claim,” citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Appellants respectfully submit that the Examiner has failed to establish anticipation of claims 1-3, 7 and 21-24 by Tanaka.

Independent claim 1 is directed to an apparatus comprising a basic device and an accessory device. The claim specifies that the basic device includes a docking interface, and that the accessory device couples to the docking interface of the basic device. The claim further specifies that a power supply unit of the accessory device supplies electrical energy to a control processor of the accessory device in response to a control signal received from the basic device, with the control signal being indicative of whether or not an application which requires use of the accessory device is currently running on the basic device.

As noted above, in an illustrative embodiment shown in FIGS. 1 and 2 of the drawings, the basic device is a personal digital assistant (PDA) 10 having a docking interface 16, and the accessory device is a digital camera 18 having a corresponding mating interface 20. The digital camera 18 couples to the docking interface 16 of the PDA 10 as illustrated in FIG. 2. See the specification at, for example, page 3, lines 17-28. The digital camera 18 is powered on using a control signal that is indicative of whether or not an imaging application program is running on the PDA 10. See the specification at, for example, page 3, line 29, to page 4, line 2, and page 5, lines 3-9. An advantage of this arrangement is that the digital camera 18 is powered up only

when needed, and without manual intervention of the user, so as to provide improved conservation of power. See the specification at, for example, page 5, lines 26-28.

In formulating the §102(e) rejection, the Examiner argues with reference to FIG. 1 of Tanaka that the basic device of claim 1 is met by a given video reception terminal station 18 and the accessory device of claim 1 is met by a combination of a given camera control device 14 and a given video camera 16. Further, the Examiner argues that the recited docking interface of the basic device of claim 1 is met by the network interface 142 of the video reception terminal station 18 as shown in FIG. 3 of Tanaka. See the Final Office Action at page 2, last paragraph, to page 3, first paragraph. However, as noted above, the claim calls for the basic device to include a docking interface, and for the accessory device to couple to the docking interface of the basic device. It is respectfully submitted that the network interface 142 as shown in FIG. 3 of Tanaka is not a docking interface of the type recited in the claim. The network interface 142 interfaces the video reception terminal station 18 with a network 10, as indicated in FIG. 1. A corresponding video transmission terminal station 12 associated with camera control device 14 and video camera 16 includes a network interface 42 that interfaces the station 12 with the network 10, as shown in FIG. 2. Thus, there is no docking of a combination of device 14 and camera 16 with the reception terminal station 18 in the Tanaka reference. The Examiner appears to be in effect reading the word docking out of claim 1, and is thereby failing to give patentable weight to each and every claim limitation. The specification provides description of a docking interface at, for example, page 3, lines 17-28.

In an Advisory Action dated December 8, 2006, at page 2, first paragraph, the Examiner appears to state that Tanaka refers to interfaces 42 and 142 as “docking interfaces.” However, as indicated previously, these elements in Tanaka are described as network interfaces, and not docking interfaces. It is respectfully submitted that one skilled in the art would recognize that a docking interface is distinct from a network interface. Tanaka makes no reference to the term “docking,” or to any similar term, and accordingly fails to anticipate the recited docking interface.

As noted above, claim 1 further specifies that the control signal that controls the power supply of the accessory device is indicative of whether or not an application which requires use of the accessory device is currently running on the basic device.

In the Tanaka reference, a control signal from terminal station 18 to power on a camera 16 does not provide such an indication. There is no direct correspondence between the Tanaka camera power-on control signal and any particular application running on terminal station 18. Instead, the camera is apparently turned on at will without regard to what applications are running on terminal station 18. See Tanaka at, for example, column 7, lines 16-20. Thus, Tanaka fails to provide the automatic power conservation advantages that are provided by the claimed arrangement.

The Examiner in the Advisory Action, at page 2, second paragraph, argues that Tanaka meets the limitation relating to a control signal indicative of whether or not an application which requires use of the accessory device is currently running on the basic device, in teaching that camera power button 70 of terminal station 18 can be activated in order to turn camera 16 on. However, activating the camera power button 70 is a manual operation, not tied to the running of any particular application that requires the use of the camera, and therefore does not provide the automatic power consumption advantages of the recited arrangement. In the claimed arrangement, the control signal particularly indicates that an application requiring use of the accessory device is currently running, while in Tanaka one could apparently manually turn on the camera 16 using button 70 even if no application requiring use of the camera is currently running. This could lead to the camera being inadvertently powered on and left on, thereby draining its batteries. See the specification at, for example, page 1, lines 24-28. The claimed arrangement advantageously overcomes this problem.

It is therefore respectfully submitted that Tanaka fails to teach or suggest each and every limitation of independent claim 1.

Dependent claim 7 is believed allowable for at least the reasons identified above with regard to claim 1.

Claim 2

Dependent claim 2 recites that the power supply unit of the accessory device maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor. In an illustrative embodiment shown in FIG. 4 of the drawings, a first control signal denoted CTS is

received from the PDA 10 via the docking interface 16 and mating interface 20, and triggers the digital camera 18 to transition from a powered-off state to a powered-on state. See the specification at, for example, page 5, lines 1-17. A second control signal denoted SMPS ENABLE is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5.

The Examiner argues that the limitations of claim 2 are anticipated by the teachings in Tanaka relating to turn-off override by the camera control server 56, as described in column 11, line 55, to column 13, line 4. See the Final Office Action at page 3, second paragraph. However, the limitations in question require that the power supply unit of the accessory device maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor. In the Tanaka turn-off override, there is no such further control signal supplied to a power supply unit. Instead, the camera control server 56 “does not execute . . . any power turn-off processing.” See column 12, lines 13-21. Thus, there is no further control signal supplied by the camera control server 56 to cause a power supply unit to maintain electrical energy as recited. Claim 2 is therefore not anticipated by Tanaka.

Claim 3

Dependent claim 3 recites that the power supply unit of the accessory device includes a power management circuit that receives the control signal from the basic device and the further control signal from the control processor, and a power supply that supplies the electrical energy to the control processor. An example of the further control signal is the signal denoted SMPS ENABLE in FIG. 4 of the present application. This signal is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit 34 so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5. As described in the context of claim 2 above, the recited further control signal is not present in Tanaka, and accordingly Tanaka fails to teach or suggest a power

management circuit that receives such a further control signal from a control processor.

Claims 21-24

Independent claim 21 includes limitations relating to an accessory device having a power supply unit and a control processor. The power supply unit of the accessory device is activated in response to a first control signal from a basic device to supply electrical power from the power supply unit to the control processor of the accessory device. A second control signal is generated with the control processor of the accessory device and supplied to the power supply unit. The operation of the power supply unit is latched in response to the second control signal to maintain the supply of electrical power from the power supply unit to the control processor regardless of the state of the first control signal. It is important to note that it is the control processor of the accessory device that generates the second control signal in claim 21.

In formulating the §102(e) rejection of claim 21, the Examiner again argues that the basic device of claim 21 is met by a given video reception terminal station 18 and the accessory device of claim 21 is met by a combination of a given camera control device 14 and a given video camera 16. The Examiner further argues that the second control signal recited in claim 21 is met by the turn-off override arrangement described in column 11, line 55, to column 13, line 4, of Tanaka. See the Office Action at page 4, last paragraph, to page 5, first paragraph. However, it is clearly stated at column 12, lines 13-21, of Tanaka that it is the camera control server 56 which controls this turn-off override operation. As is readily seen from FIG. 4, the camera control server 56 is an element of the video transmission terminal station 12, and is thus not part of the alleged accessory device 14, 16 identified by the Examiner. Accordingly, the relied-upon arrangements of Tanaka fail to teach or suggest the claimed step of generating a second control signal with a control processor of an accessory device.

Moreover, in the Tanaka turn-off override, there is no second control signal supplied from a control processor of an accessory device to a power supply unit of the accessory device to latch the operation of the power supply unit. Instead, as indicated

previously herein, the Tanaka turn-off override operates such that the camera control server 56 “does not execute . . . any power turn-off processing.” See column 12, lines 13-21. Thus, there is no second control signal supplied by the camera control server 56 to cause a power supply unit to maintain electrical energy as recited.

The Examiner in the Advisory Action, at page 2, fourth paragraph, argues that the recited second control signal is met by an unidentified signal that is allegedly transmitted by the camera 16 to the camera control server 56 with the signal “indicating that an image is currently being transmitted to another terminal.” However, there is no such signal described in Tanaka. To the contrary, Tanaka indicates that the determination as to whether an image from camera 16 is being transmitted to another terminal is made by the camera control server 56, and not based on any signals transmitted from the camera 16. See Tanaka at column 12, lines 13-17.

It is therefore respectfully submitted that Tanaka fails to teach or suggest each and every limitation of independent claim 21.

Dependent claims 22-24 are believed allowable for at least the reasons identified above with regard to claim 21.

2. §103(a) Rejection of Claims 4, 13-16 and 19

Claim 4

Dependent claim 4 recites that the power management circuit includes a first switching element that is responsive to the control signal and the further control signal to generate a power activation signal, and a second switching element that is responsive to the power activation signal. An example of the further control signal is the signal denoted SMPS ENABLE in FIG. 4 of the present application. This signal is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit 34 so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5. Examples of the recited first and second switching elements include the respective bipolar and field effect transistors shown in FIG. 4. As described in the context of claims 2 and 3 above, the recited further control signal is not present in Tanaka, and accordingly Tanaka fails to teach

or suggest a power management circuit that includes a first switching element that is responsive to such a further control signal to generate a power activation signal.

Claim 13

Appellants respectfully traverse on the ground that the relied-upon references fail to meet each and every limitation of independent claim 13. For example, claim 13 calls for a digital camera accessory device that comprises a docking interface. The Examiner in formulating the §103(a) rejection over Tanaka argues that network interface 142 of station 18 in Tanaka constitutes a docking interface of the type recited. Appellants respectfully disagree for reasons similar to those provided above in the context of claim 1. A network interface of the type disclosed in Tanaka is not believed to anticipate the recited docking interface. Moreover, Appellants note that the discussion provided by the Examiner at page 7, second paragraph, of the Office Action relies on network interface 142 of the station 18, and the Examiner identifies station 18 as corresponding to a basic device. In claim 13, the recited docking interface is an element of the digital camera accessory device, and not of a basic device.

The Examiner in formulating the rejection argues that the recited digital camera accessory device is a combination of camera control device 14 and video camera 16. However, it is apparent from FIGS. 1, 2 and 3 of Tanaka that the network interfaces 42 and 142 are interfaces between respective terminal stations 12, 18 and the network 10. Moreover, the I/O board 34 is part of the terminal station 12. None of the elements 34, 42 or 142 relied upon by the Examiner is an element of the combination of camera control device 14 and video camera 16, which the Examiner has identified as the recited digital camera accessory device. Accordingly, Tanaka fails to meet the limitations in question.

Claim 14

Dependent claim 14 recites that the power supply unit of the digital camera accessory device maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor. In an illustrative embodiment shown in FIG. 4 of the drawings, a first control signal

denoted CTS is received from the PDA 10 via the docking interface 16 and mating interface 20, and triggers the digital camera 18 to transition from a powered-off state to a powered-on state. See the specification at, for example, page 5, lines 1-17. A second control signal denoted SMPS ENABLE is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5.

The Examiner argues that the limitations of claim 14 are obvious in view of the teachings in Tanaka relating to turn-off override by the camera control server 56, as described in column 11, line 55, to column 13, line 4. See the Final Office Action at page 8, second paragraph. However, the limitations in question require that the power supply unit of the accessory device maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor. In the Tanaka turn-off override, there is no such further control signal supplied to a power supply unit. Instead, the camera control server 56 “does not execute . . . any power turn-off processing.” See column 12, lines 13-21. Thus, there is no further control signal supplied by the camera control server 56 to cause a power supply unit to maintain electrical energy as recited. The Tanaka reference therefore fails to meet the limitations of claim 14.

Claims 15, 16 and 19

Dependent claim 15 recites that the power supply unit of the accessory device includes a power management circuit that receives the control signal from the basic device and the further control signal from the control processor, and a power supply that supplies the electrical energy to the control processor. An example of the further control signal is the signal denoted SMPS ENABLE in FIG. 4 of the present application. This signal is generated by the control processor 30 as shown in FIG. 4 and latches the operation of the power supply unit 34 so as to make it insensitive to any instability in the CTS signal during an imaging operation. See the specification at, for example, page 5, lines 14-16, and page 5, line 26, to page 6, line 5. As described in the context of claim 14 above, the recited further control signal is not

present in Tanaka, and accordingly Tanaka fails to teach or suggest a power management circuit that receives such a further control signal from a control processor. Claim 15 is therefore not obvious in view of Tanaka.

Dependent claims 16 and 19 are believed allowable for at least the reasons identified above with regard to claim 15.

3. §103(a) Rejection of Claims 6, 12, 18 and 20

Claims 6 and 18

Appellants have traversed the rejections of claims 6 and 18 based on Official Notice in their previous responses, and accordingly it is believed that the allegedly admitted prior art is not in fact admitted. Nonetheless, even if the use of bipolar and field effect transistors is assumed to be known in the art, the claims at issue require something more particular, namely, use of a bipolar transistor for a first switching element and a field effect transistor for a second switching element, where the first switching element is responsive to a control signal and a further control signal to generate a power activation signal, and the second switching element is responsive to the power activation signal. An example of such an arrangement is shown in FIG. 4, comprising field effect transistor Q1 and bipolar transistor Q2. It is respectfully submitted that such an arrangement would not be obvious in view of Tanaka and the general use of bipolar and field effect transistors as known in the art.

Claims 12 and 20

Dependent claims 12 and 20 recite a power supply unit that includes a power management circuit comprising a capacitor and resistor network that receives the control signal from the docking interface, the capacitor and resistor network comprising at least one capacitor and at least one resistor, and a power supply coupled to the power management circuit, and wherein said capacitor and resistor network maintains an input of the power supply at a logic level required to maintain the electrical energy when the control signal fluctuates. An example of the recited power management circuit is shown in FIG. 6 of the present application. See the specification at, for example, page 6, lines 6-24.

The Examiner acknowledges that the particular limitations of these claims are not met by Tanaka, but argues that they are obvious in view of Tanaka and allegedly admitted prior art. See the Final Office Action at pages 10-11. However, Appellants have not acknowledged that the recited limitations constitute prior art. To the contrary, Appellants in their previous responses have specifically traversed the rejections based on Official Notice. Moreover, although capacitor and resistor networks may be known in the art, the limitations in question go much further than that, specifying particular interconnections and functionality of the recited capacitor and resistor network, such as the network receiving a control signal, and maintaining an input of a power supply at a logic level required to maintain electrical energy when the control signal fluctuates. Accordingly, it is believed that the collective teachings of Tanaka and the known use of capacitor and resistor networks in the prior art fail to meet the particular limitations in question.

4. §103(a) Rejection of Claims 5 and 17

The Elberbaum reference fails to supplement the fundamental deficiencies of Tanaka as applied to independent claims 1 and 13. Claims 5 and 17 are believed allowable for at least the reasons identified above with regard to respective claims 4 and 16, which indirectly depend from respective claims 1 and 13.

Conclusion

For the above reasons, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 1-24.

Respectfully submitted,

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Enclosures



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If the Examiner is unable to reach the Appellants' Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

Appendix I - Claims on Appeal

1. An apparatus comprising:
a basic device including a docking interface; and
an accessory device, including a control processor and a power supply unit, that couples to the docking interface of the basic device;
wherein the power supply unit supplies electrical energy to the control processor in response to a control signal received from the basic device;
wherein the control signal provides an indication from the basic device to the accessory device that the accessory device is to be powered on using a power source internal to the accessory device;
wherein the control signal triggers a transition of the accessory device from a powered-off state in which the power supply unit is deactivated and the control processor is powered off to a powered-on state in which the power supply unit is activated and the control processor is powered on, the control signal being indicative of whether or not an application which requires use of the accessory device is currently running on the basic device.
2. An apparatus as claimed in claim 1, wherein the power supply unit maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor.
3. An apparatus as claimed in claim 2, wherein the power supply unit includes a power management circuit that receives the control signal from the basic device and the further control signal from the control processor, and a power supply that supplies the electrical energy to the control processor.
4. An apparatus as claimed in claim 3, wherein the power management circuit includes a first switching element that is responsive to the control signal and the further control signal to generate a power activation signal, and a second switching element that is responsive to the power activation signal.

5. An apparatus as claimed in claim 4, wherein the accessory device further includes at least one battery, and the second switching element couples the battery to the power supply in response to the power activation signal.

6. An apparatus as claimed in claim 4, wherein the first switching element comprises a bipolar transistor and the second switching element comprises a field effect transistor.

7. An apparatus as claimed in claim 3, wherein the power supply comprises a switched mode power supply.

8. An apparatus as claimed in claim 1, wherein the basic device comprises a personal digital assistant device.

9. An apparatus as claimed in claim 8, wherein the accessory device comprises a digital camera.

10. An apparatus as claimed in claim 9, wherein the control processor controls the operation of the digital camera to capture image data in response to a control signal received from the basic device.

11. An apparatus as claimed in claim 9, wherein the personal digital assistant includes a display device, and wherein image data captured by the digital camera is displayed on the display device of the personal digital assistant.

12. An apparatus as claimed in claim 1, wherein the power supply unit includes a power management circuit comprising a capacitor and resistor network that receives the control signal from the basic device, the capacitor and resistor network comprising at least one capacitor and at least one resistor, and a power supply coupled to the power management circuit, and wherein said capacitor and resistor network maintains an input of the power supply at a logic level required to maintain the electrical energy when the control signal fluctuates.

13. A digital camera accessory device comprising:
a lens system;
a docking interface;
image processing circuitry that captures image data;
a control processor that controls the operation of the image processing circuitry to perform an image capture operation; and
a power supply unit that supplies electrical energy to the image processing circuitry and the control processor;
wherein the power supply unit supplies the electrical energy to the control processor in response to a control signal received from the docking interface;
wherein the control signal provides an indication to the accessory device that the accessory device is to be powered on using a power source internal to the accessory device; and
wherein the control signal triggers the digital camera accessory device to transition from a powered-off state in which the power supply unit is deactivated and the control processor is powered off to a powered-on state in which the power supply unit is activated and the control processor is powered on.

14. A digital camera as claimed in claim 13, wherein the power supply unit maintains the electrical energy supplied to the control processor in response to a further control signal received from the control processor.

15. A digital camera as claimed in claim 14, wherein the power supply unit includes a power management circuit that receives the control signal and the further control signal and a power supply that supplies the electrical energy to the control processor.

16. A digital camera as claimed in claim 15, wherein the power management circuit includes a first switching element that is responsive to at least one of the control signal and the further control signal to generate a power activation

signal, and a second switching element that is responsive to the power activation signal.

17. A digital camera as claimed in claim 16, wherein the digital camera further includes at least one battery, and the second switching element couples the battery to the power supply in response to the power activation signal.

18. A digital camera as claimed in claim 16, wherein the first switching element comprises a bipolar transistor and the second switching element comprises a field effect transistor.

19. A digital camera as claimed in claim 15, wherein the power supply comprises a switched mode power supply.

20. An apparatus as claimed in claim 13, wherein the power supply unit includes a power management circuit comprising a capacitor and resistor network that receives the control signal from the docking interface, the capacitor and resistor network comprising at least one capacitor and at least one resistor, and a power supply coupled to the power management circuit, and wherein said capacitor and resistor network maintains an input of the power supply at a logic level required to maintain the electrical energy when the control signal fluctuates.

21. A method of managing the power requirements of an accessory device coupled to a basic device comprising:

generating a first control signal with the basic device and supplying the first control signal to the accessory device;

the first control signal providing an indication from the basic device to the accessory device that the accessory device is to be powered on using a power source internal to the accessory device;

activating a power supply unit of the accessory device in response to the first control signal to supply electrical power from the power supply unit to a control processor of the accessory device;

generating a second control signal with the control processor of the accessory device and supplying the second control signal to the power supply unit; and

latching operation of the power supply unit in response to the second control signal to maintain the supply of electrical power from the power supply unit to the control processor regardless of the state of the first control signal;

wherein the first control signal triggers a transition of the accessory device from a powered-off state in which the power supply unit is deactivated and the control processor is powered off to a powered-on state in which the power supply unit is activated and the control processor is powered on.

22. A method as claimed in claim 21, further comprising maintaining the latching of the operation of the power supply unit for a predetermined time period.

23. A method as claimed in claim 22, further comprising discontinuing the latching of the operation of the power supply unit after expiration of the predetermined time period in response to the state of the first control signal.

24. A method as claimed in claim 23, further comprising performing an accessory operation with the accessory device in response to an activity command signal and resetting the predetermined time period after completion of the accessory operation.

Appendix II - Evidence

NONE

Appendix III – Related Proceedings

NONE